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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,318	12/28/2006	Michitsugu Mori	292878US2PCT	9802
22850	7590	06/06/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PATEL, PUNAM	
			ART UNIT	PAPER NUMBER
			2855	
			NOTIFICATION DATE	DELIVERY MODE
			06/06/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/584,318	Applicant(s) MORI ET AL.	
	Examiner PUNAM PATEL	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/06 & 9/20/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Ultrasonic-Doppler System For Measuring Flow Velocity, Pipe Inner Diameter, and Flow Rate".

Drawings

Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Art Unit: 2855

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

The disclosure is objected to because of the following informalities: The claims should not be referred to in the Specification, since they may need to be renumbered during prosecution. Appropriate correction is required.

Claim Objections

Claims 4-7 are objected to because of the following informalities:

With respect to Claims 4-7, the method steps have been written incorrectly. I.e. the limitation of "graph outputting to output a flow velocity distribution graph" is not a method step, but rather a component. It is suggested language such as "**outputting** a flow velocity distribution graph" be utilized.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Currently the claims are directed towards a computer program product "which cannot occupy a space by itself." See Specification ¶ 22. In order to place the

claimed invention in a statutory class, it is suggested the applicant amend the claim language as follows:

“A computer program product embodied in a computer readable medium”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by. Mori et al. (M. Mori, K. Tezuka, H. Tezuka, N. Furuichi, H. Kikura, Y. Takeda. “Industrial application experiences of new type flowmetering system based on ultrasonic-doppler flow velocity-profile measurement.” *Third International Symposium on Ultrasonic Doppler Methods for Fluid Mechanics and Fluid Engineering*. EPFL, Lausanne, Switzerland. September 9-11, 2002)

With respect to Claims 1, 4, 6, Mori et al. disclose an apparatus/method comprising:
an ultrasonic transmitter for launching ultrasonic pulses of a predetermined frequency into the fluid to be measured in a fluid pipe from an ultrasonic transducer along a measuring line (Fig. 6);

a flow velocity distribution measuring means for measuring flow velocity distribution of the fluid to be measured in a measurement region by receiving ultrasonic echoes reflected from the measurement region among the ultrasonic pulses incident into the fluid to be measured (Fig. 8, wherein a flow velocity distribution graph is displayed; Compare with Applicant's Fig. 3);

a flow rate operation means for calculating a flow rate of the fluid based on the flow velocity distribution (pg. 121-122, the Concluding remarks, wherein the velocity distribution is used to accurately measure flow rates on-site), specifically the flow rate is measured using an integral operation (pg. 116);

an inner wall position calculating means for calculating the position of the inner wall with respect to the axis in the inner diameter direction by calculating its inflection point from the flow velocity distribution graph (Fig. 8, wherein the inflection point is marked by a vertical line).

See Fig. 7-8 for the software and hardware that perform the functions/calculations.

With respect to Claims 2, 3, 5, and 7, Mori et al. teach a manual/fine adjustment input data receiver (Fig. 7, the keyboard/touch pad). Also see Fig. 8, wherein the software GUI has a "Manual" tab, and input boxes, wherein a numerical value can be typed in.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Han et al. (US 2002/0166383) disclose a method for accurately determining the inner diameter of the pipe, wherein the diameter may have changed due to pipe buildup. Soltz (US 4,397,194) disclose a means for accurately measuring pipe inner diameter. Shekarriz et al. (US 6,067,861) & Smith (US 6,158,288) disclose methods for determining pipe inner diameter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PUNAM PATEL whose telephone number is (571)272-6794.

The examiner can normally be reached on Monday to Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Lefkowitz/
Supervisory Patent Examiner, Art Unit 2855

PP
06/02/2008